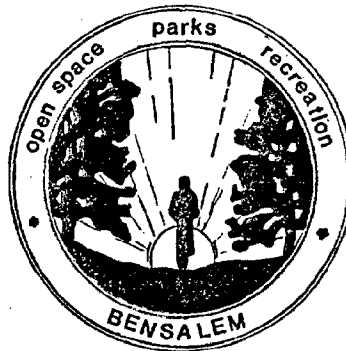


MASTER PLAN STUDY,
JAMES ARMSTRONG MEMORIAL PARK

PREPARED FOR
BENSALEM TOWNSHIP
PARKS & RECREATION BOARD



JULY 1981

PREPARED BY
CARROLL ENGINEERING CORPORATION
387 YORK ROAD
WARMINSTER, PA.
AND
E. VAN RIEKER, AICP
CONSULTANT LAND PLANNER

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ACKNOWLEDGEMENTS

This study was prepared through the assistance, direction and cooperation of the following:

- . Bensalem Township Parks and Recreation Board, Russell Manning, Chairman; Arthur Wilson; Robert Stahl; Rosemary Halloran, Ron Polakawski; members.
- . Jerry A. Andree, Director of Parks and Recreation
- . Natalie A. Strange, Township Manager
- . Thomas Donnelly, Bensalem Township Citizen Advisor
- . Jerry M. Sudick, Manager Coastal Zone Management Office of the Department of Environmental Resources.
- . Michael A. Wolf, Chief Land Resources Planning, Delaware Valley Regional Planning Commission.
- . Ken Kugel, Chief Planner, Bucks County Planning Commission.

A special acknowledgement is given to E. Van Rieker, AICP who through Carroll Engineering was responsible for the planning aspects of this project.

MASTER PLAN STUDY
JAMES ARMSTRONG MEMORIAL PARK

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MASTER PLAN STUDY

JAMES ARMSTRONG MEMORIAL PARK

I. GENERAL

A. Introduction

Due to national concern over development pressures on the ocean, Great Lakes and estuarine shore lines, the United States Congress in late 1972 enacted the Coastal Zone Management Act. The Act encourages states to develop comprehensive programs to ensure effective management of their coastal resources. As a result of this, the Commonwealth of Pennsylvania, through the Department of Environmental Resources Office of Resource Management developed and published the "Pennsylvania Coastal Zone Management Program Technical Record", in December of 1978. This report addressed the Lake Erie water front and the Delaware Estuary.

Bensalem Township is designated a Coastal Zone Community within the Delaware Estuary due to its frontage along the Delaware River as well as its frontage on the Neshaminy Creek, a tributary to the Delaware River.

James Armstrong Memorial Park is a site which is situated along the Neshaminy Creek. The site has been identified as an area of "Significant recreational, historic, or cultural value" in the Pennsylvania Coastal Zone Management Program, Technical Report.

As such, the park site is further identified as an area of existing open space where recreational needs can be served and public access to the water's edge exists.

The Bensalem Township Parks and Recreation Board has undertaken the task of developing a Master Plan for the James Armstrong Memorial Park which is being funded by a grant from the Pennsylvania Department of Environmental Resources, Coastal Zone Management Program.

James Armstrong Memorial Park is a site of approximately 20 acres situated along the Neshaminy Creek in the easterly section of Bensalem Township, Bucks County, Pennsylvania. Refer to Exhibit No. 1, Location Map, for more detail.

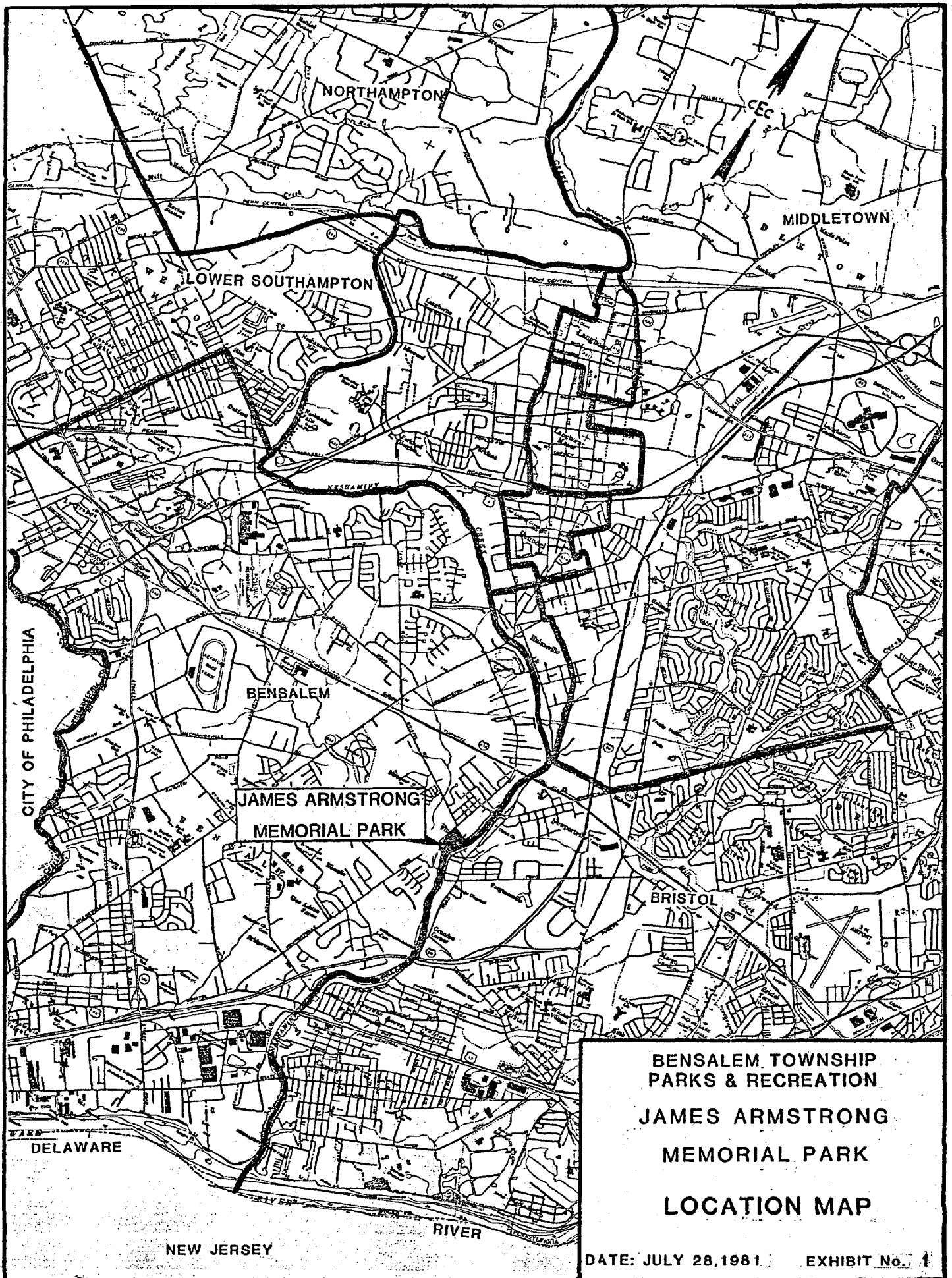
The site also has frontage to Bensalem Boulevard at a point generally opposite the intersection with Bristol Road.

The park is composed of the following properties:

| | |
|------------|---------------------------------------|
| 17.0 Ac. | Township owned |
| 0.7 | Bucks County Redevelopment Authority, |
| 0.7 | Privately owned (to be acquired) |
| <u>1.5</u> | Land in vacant street ROW |
| 19.9 Ac. | Park Total |

B. Scope of Study

The Bensalem Township Parks and Recreation Board has retained the firm of Carroll Engineering Corporation to prepare a Planning Study to consist of a Master Plan, with three alternatives and a program for the development of the James Armstrong Memorial Park.



BENSALEM TOWNSHIP
PARKS & RECREATION

JAMES ARMSTRONG
MEMORIAL PARK

LOCATION MAP

DATE: JULY 28, 1981 EXHIBIT No. 1

The Planning Study has been prepared in close coordination with the Delaware Valley Regional Planning Commission (DVRPC), the Bucks County Planning Commission (BCPC), the Bucks County Parks Department, The Bensalem Township Parks and Recreation Board as well as the general public which was invited to public presentations April 28 and June 23, 1981. The public meetings were held by the Township Parks and Recreation Board.

In addition to the Planning Study, a monumentation plan was prepared and monuments were placed to specifically identify the perimeter of the park property and to target those properties that could be acquired and assembled to become a part of the park.

C. Data Used for this Study

The reports and studies listed below have been obtained from various sources and were reviewed in order to determine recreational needs and appropriate standards and criteria for recreational facilities.

Bucks County Park Plan, Bucks County Planning Commission;
July 1974.

Demand for Recreational Access to the Lower Delaware River,
League of Women Voters of Pennsylvania; November 1980.

Pennsylvania Coastal Zone Management Program, Executive Summary,
Commonwealth of Pennsylvania and other; September 1979.

"Amended Redevelopment Proposals for the Creek Road North and Creek Road South", Bensalem Township; Redevelopment Authority of the County of Bucks; July 1976.

Recreation, Parks and Open Space Plan, Bensalem Township, Bucks County, Pennsylvania; September 1976.

Facilities Planning, Bensalem Township Park and Recreation Plan; July 1976.

The Comprehensive Plan, Bensalem Township; adopted and printed January 29, 1975.

Bensalem Township Comprehensive Plan, David M. Walker Associates, Inc.; adopted and printed February 5, 1968.

A Comprehensive Park and Recreation Study, Bristol Township, Bucks County, Pa.; George E. Patton, Inc., October 1, 1974.

"Flood Hazard Maps of the Neshaminy Creek in Bensalem Township, Bucks County, Pa." Bensalem Township Engineer; April 6, 1977.

D. Ownership of Land

As previously noted, the township presently owns 18.5 acres or 93% of the park property between the southerly limit and Pennsylvania Avenue. There are ten properties within the site area, not presently owned by the township. Two of those properties are owned by the Bucks County Redevelopment Authority and the remaining eight properties belong to four different owners.

Exhibit No. 2 shows the properties, as recorded, at the time of this report. Some of the privately owned properties may have been acquired and not yet recorded.

The site also contains approximately 1.5 acres of street which are no longer physically open. We are proposing these streets be stricken and vacated. When this is done by the Board of Supervisors, the ground contained in the street right-of-way will transfer to the adjacent property owners, which in most cases is the Township of Bensalem. The streets to be stricken and vacated are also shown on Exhibit No. 2. We do not see

the need to strike Creek Road or Maine Avenue since the access road for the park is coincides with these streets. Also, Creek Road contains an existing sanitary sewer belonging to the Bucks County Water and Sewer Authority. If this street was stricken, a right-of-way would have to be established for the aforementioned sanitary sewer.

E. Monumentation Plan

As required, in accordance with the scope of work and proposal for this project, a monumentation plan along with the placement of monuments was required. Exhibit No. 3 shows where the monuments were placed to define the boundaries of the project. In addition to these monuments, pins were placed at certain locations which were requested by the park director. Exhibit No. 3 also shows the locations of these pins.

F. Existing Conditions

Natural Features

There are five predominant natural features which characterize the project site and, to a large measure, dictate the design and location of future facilities. These features can be seen on Exhibit No. 4 and are as follows:

1. Neshaminy Creek - The configuration of the park is generally rectangular with the long dimension parallel to the Neshaminy Creek for a distance of 1600 feet. The creek is between 70 ft. to 150 ft. in width and varies in depth between two and six feet depending upon the tidal influence and seasonal precipitation.

Most of the Creek edge consists of a rugged bank which in places is perched eight to ten feet in elevation above the water level. This feature of extensive frontage to the Neshaminy Creek is the most significant and interesting natural feature which distinguishes this park from most others in the Township.

2. Flood Plain - Most of the site is situated below the high elevation of the 100 year flood plain as determined by the Township Engineer. While this may not preclude recreational use it does suggest that overnight use along with expensive permanent structures should be avoided. In general, the site will not be affected by smaller floods occurring at more frequent intervals along the creek.
3. Woodland - A large percentage (70%) of the site is wooded consisting of large and moderate sized mature ash, oak and tulip trees with a deciduous canopy. This area covers predominantly the northerly third and southerly one-half of the site. This wooded characteristic provides fine protection for picnicking, hiking trails, and is quite conducive as a setting for a natural preserve. Woods also provide an excellent buffer along most of the perimeter of the park, especially along Bensalem Boulevard and behind the adjacent commercial property - which is currently vacant. Thick vegetative understory will require clearing in those areas where recreation use is desired, such as for picnicking or play.

In addition to woodland masses, there are over 50 large specimen shade trees with large caliper (12" to 30" caliper) and height (50 - 60 ft.). These individuals have been shown on the Master Plan and align the creek bank and both sides of the existing drive. These trees are of particular benefit visually and provide shade as well as scale from the overhead canopy.

4. Steep Slopes - The entire westerly edge of the site has steep slopes, in some places so severe that the escarpment land form prohibits access. This is especially true along Flushing Road and behind the commercial parcel. Vehicular access must be carefully planned and it seems that the present circulation pattern is the most viable. The slopes in conjunction with the woodland reinforces the natural barrier along the westerly perimeter.
5. Level Land - The majority of the site is level to gentle sloping (slopes under 3%) particularly in the central meadow and along the creek edge. The level land - some open and some wooded - is particularly suitable for play, parking, camping, bicycle/jogging trails and for play fields where not wooded.

Man-Made Features

There are four man-made features that should be considered in any park master plan for development:

1. Existing Drive - Partially paved and suitably graded, this driveway extends from Bensalem Boulevard through the site and parallel to the creek and ultimately links to Creek Road which intersects at Bridge Street just west of the Bridge.

Presently, park visitors use the existing driveway in two-way fashion, but park cars indiscriminantly in the park facility, especially along the creek edge.

2. Sanitary Sewer - An existing sewer line runs along Creek Road parallel to the Creek and traverses the south easterly portion of the park. This existing utility provides an excellent opportunity for toilet facilities for park patrons.
3. Existing Creek Edge Wall - A concrete block wall - tied into a fishing pier at one point - runs along the edge of the Neshaminy Creek for a short distance. Although not a significant structure, the walls nevertheless indicate how to popularize fishing piers and should be incorporated into future plans for the park.
4. Existing Basketball Court - An asphalt basketball court exists in a shaded location on the gravel entrance drive. This is the extent of active recreation presently provided. Its location and surface conditions are good and the basketball court should be planned into any future scheme for park development.

II. MASTER PLAN

A. Plans and Policies

1. Park Features

The James Armstrong Memorial Park has a number of exciting and diverse natural features all of which are quite suitable for active and passive recreation in a true park-like setting.

Of these features, the extensive frontage along the Neshaminy Creek coupled with easy vehicular access to nearby roads provides the opportunity for excellent public access which is the foremost attribute of the park. This is enhanced by the woodland setting.

Without exception, publications research, public input, suggestions from the Township Parks and Recreation Board, and other agencies all indicate that activities along the Neshaminy Creek such as creek bank fishing and non-powered aquatic activities should be emphasized.

Figure A: Suitablity of Natural Characteristics for Various Recreation Facilites charts 21 recreation activities from those most passive to most active and ranks their suitability to nine basic natural features characteristic of the subject site.

Figure B: Needs Identified form Various Studies charts the same 21 recreation activities and ranks their preference as indicated in ten recreation and park planning studies.

| SUITABILITY OF NATURAL CHARACTERISTICS FOR VARIOUS RECREATION FACILITIES | RECREATION FACILITIES | | | | | | | | | | | | | | ACTIVE | | | | | | | | |
|--------------------------------------------------------------------------|-----------------------|--------------------|---------|---------------|------------------------------|-------------------|-------------------|---------|------------|----------------|-------------|------------|--------|-------------|------------------|------|---------|---------------------|---------------|----------|-------------------|-------|---|
| | NATURAL PRESERVE | SIGHTSEEING/SCENIC | FISHING | HIKING TRAILS | BICYCLING / HORSEBACK RIDING | EXERCISE STATIONS | CANOEING / ROWING | SAUNING | PICNICKING | PLAY EQUIPMENT | PLAY FIELDS | BASKETBALL | TENNIS | ICE SKATING | SLEEPING/LODGING | GOLF | HUNTING | CAMPING (OVERNIGHT) | POWER BOATING | SWIMMING | INDOOR RECREATION | OTHER | |
| 1. FOREST | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2. FLOODPLAIN | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3. STEEP SLOPES | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 4. GENTLE TO LEVEL (SLOPE) PREDOMINANTLY OPEN | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 5. EDGE OF CREEK | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 6. MARSH | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 7. RIDGES AND HILLS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 8. GOOD VIEWS / PRIVACY | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 9. LIMITING FACTORS' - FLOOD PLAIN - SIZE (UNDER 25 AC.) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

JAMES ARMSTRONG MEMORIAL PARK
 BENSALEM TOWNSHIP - BUCKS COUNTY - PENNSYLVANIA APRIL 28, 1981
 PROFESSIONAL LAND PLANNER Carroll Engineering Corporation
 E. VAN RIEKER, AICP 387 York Rd.
 WARMINSTER, PA 18974

FIGURE A

| NEEDS IDENTIFIED FROM VARIOUS STUDIES: X SPECIFIC REFERENCE O GENERAL REFERENCE | STUDY DOCUMENT | RECREATION FACILITIES | | | | | | | | | | | | | | ACTIVE | | | | | | | |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------|----------------------|---------|---------------|---------------------------------|-------------------|-------------------|---------|------------|----------------|-------------|------------|--------|-------------|----------------------|------|---------|---------------------|---------------|----------|-------------------|-------|
| | | NATURAL PRESERVE | SIGHTSEEING / SCENIC | FISHING | HIKING TRAILS | BICYCLING / HORSEBACK RIDING | EXERCISE STATIONS | CANOEING / ROWING | SAILING | PICNICKING | PLAY EQUIPMENT | PLAY FIELDS | BASKETBALL | TENNIS | ICE SKATING | SLEEPING / COTTAGING | GOLF | HUNTING | CAMPING (OVERNIGHT) | POWER BOATING | SWIMMING | WINTER RECREATION | OTHER |
| | 1. PENNA. COASTAL ZONE MGMT. PROGRAM, TECHNICAL RECORD, 1978. | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | X | X | | | | | | | | | |
| | 2. FACILITIES PLANNING, BEVERLY TWP PARK AND REC PLAN, 1976. | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 3. FLOOD HAZARD MAPS - HESHAUWY CREEK, 1977. | X | | | | | | | | | | | | | | | | | | | | | |
| | 4. DEMAND FOR RECREATIONAL ACCESS TO THE LOWER PELDWYSE RIVER, 1980. | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | 0 | | | | |
| | 5. BUCKS COUNTY PARK PLAN, BCPC, JULY 1974. | 0 | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 | 0 | 0 | | | | | | 0 | | |
| | 6. RECREATION, PARKS AND OPEN SPACE, BEVERLY TWP, 1976. | | | | | | | | | | | | | | | | | | | | | | |
| | 7. AMENDED APPLICATION... CREEK ROAD SOUTH, REC. NUM. 1976. | X | | | | | | | | | 0 | | | | | | | | | | | | |
| | 8. TOWNSHIP COMPREHENSIVE PLAN, 1975. | X | | | | | | | | | | | | | | | | | | | | | |
| | 9. TOWNSHIP COMPREHENSIVE PLAN, 1968. | X | | | | | | | | | | | | | | | | | | | | | |
| | 10. BRISTOL TWP PARK AND RECREATION STUDY, 1974. | | | | | | | | | | | | | | | | | | | | | | |
| | WEIGHTED SCORE | 5.5 | 1.0 | 1.0 | 2.0 | 1.0 | 1.0 | 1.0 | 0.5 | 1.0 | 1.0 | 1.0 | 0.5 | 1.5 | 1.5 | 1.5 | 0 | 0 | 0 | 0.5 | 0 | 0.5 | 0 |

X=1.0 0=0.5

JAMES ARMSTRONG MEMORIAL PARK
BEVERLY TOWNSHIP - BUCKS COUNTY - PENNSYLVANIA - APRIL 28, 1981

PROFESSIONAL LAND PLANNER Carroll Engineering Corporation
E. VAN RIEKER, AICP 387 York Rd.
WARMINSTER, PA 18974

FIGURE B

The various recreation facilities were scored in Figure B and compared to their suitability index as ranked in Figure A. The uses were then examined to their special application to the site and various master plans were prepared. This examination was performed in order to determine which activities should be encouraged.

The plans presented in this report were developed as a stage or step toward what could be classified as full development anticipated for the site, rather than totally different schemes. Emphasis should be on preservation of natural characteristics where possible.

2. Township Growth

Bensalem Township is one of the fastest growing municipalities and has the second highest population in all of Bucks County. The U.S. Census of Population figures are listed below.

| | <u>1980</u> | <u>1970</u> | <u>% Change</u> |
|---------------------|-------------|-------------|-----------------|
| Bensalem Population | 52,211 | 33,042 | 58.0 |

The growth of the Township has been outstanding. During the previous ten year period 1970 - 1980, Bensalem grew at four times the county rate. By 1980 Bensalem was the second most populated municipality in all of Bucks County.

Most importantly, the ten-year population increase of 19,169 was by far the greatest amount of increase by any municipality in Bucks County which is made even more remarkable by the fact that no other municipality in the seven county Delaware Valley Region had as large an increase as Bensalem Township.

Bensalem Township added more people (1970 to 1980) than any other municipality in the seven county Delaware Valley Region. The township ranked first in absolute population increase among over three hundred nearby communities in Pennsylvania and New Jersey.

There is an obvious need to provide a wide range of recreation opportunities for the burgeoning population generally and for the residents of townhouse and mobile home communities located nearby.

The James Armstrong Memorial Park provides a unique opportunity to fulfill these needs as a special purpose park. The broad goals are listed in the Development Policies of this report. It should be noted that the park has been ranked as a Community Activity Area in the 1978 Township Facilities Planning Report.

3. Developmental Policies

- a. The scenic and passive recreation value of the frontage along the Neshaminy Creek should be emphasized and exploited.

- b. Non-powered boating, canoeing and shore line fishing should be emphasized. Also hiking and nature trails should be provided at appropriate locations along the Neshaminy Creek.
- c. Sightseeing (river-watching) should be an important part of the passive recreation aspects of the park - especially for those not participating in boating and fishing which are popular active activities. Picnicking is a favorite ancillary activity recommended by all agencies surveyed.
- d. Local role in recreation should be a major goal and thus bikeways, hiking, sledding, ice skating and play areas should be considered in addition aquatic activities.
- e. A flood plain is an ideal location for most outdoor recreation but should not contain structures that could break loose or on-site sewage disposal.
- f. Automobile access is important since there is no opportunity for walk-in visitors. For this reason and because any development of the park will serve as an attraction, adequate on-site parking must be planned for and controlled.
- g. Circulation using existing access drives conforms to topography and should be continued. Surfaces must be

graded and paved, and a one-way circulation pattern is recommended for safety and to eliminate short cutting.

- h. Existing improvements: utilities, basketball, driveway and creek wall should be utilized where possible.
- i. Areas of debris and dumping must be cleaned and removed. Areas proposed for picnicking must have a cleared and graded understory.
- j. Natural features should be preserved and incorporated into the design where ever possible. The perimeter woodland buffer should be maintained with new growth planted where needed to reduce sight and sound to adjoining roads.
- k. The park boundary should be rounded out with acquisition of all vacant properties south of Pennsylvania Avenue being the first priority. Additional acquisition to maintain the insulative qualities of the Park while providing for possible expansion should also be considered. This action would also ensure a link park system with the ultimate goal of providing low density uses such as trails, biking and fishing along the creek bank of the Neshaminy Creek.

B. Plan Development

Three alternatives for development have been prepared and the Master Plans are shown in this report.

Rather than having different approaches, general unanimity of development policies especially when evaluated in conjunction with site constraints, suggest that one direction should be followed, this to emphasize the attributes of the park.

Therefore, each Master Plan is a progression of development with Master Plan 3 constituting the final stage plan.

The three Master Plans are:

MP-1: Limited Development, Exhibit No. 5

MP-2: Moderate Development, Exhibit No. 6

MP-3: Full Development, Exhibit No. 7

In each case, the design will emphasize the recreational opportunity (active and passive) of the Neshaminy Creek while also providing for a day use neighborhood park.

The schemes are accumulative. Each phase of design is conceived to fit into subsequent future phases which reflect a more complete park with a wide range of facilities. None of the options should be considered high intensity, i.e.: impervious surfaces and active playground type uses are minimal.

C. Administration

In addition to the costs of site acquisition and facility development, the costs of maintaining such facilities are important to insure continued enjoyment.

Standards for estimating average maintenance costs suggest that roughly 10% of the construction costs of a project will be expended yearly for maintenance. The average cost for the maintenance of open space related areas is approximately \$500 - \$1,000 per acre per year. The more natural the area the lower the cost range.

Costs for equipment rental and instructional staff - if required - are normally offset by users fees which may be charged for special or organized events.

As the number of new facilities and thus the construction costs increase, as in the MP-1 through MP-3, then so will the average annual maintenance costs. Thus, as park development advances beyond the initial stage, it should follow that the Parks and Recreation Board budget for appropriately higher maintenance and operation costs.

The Township Parks and Recreation Board may also desire to control night use for security reasons by installation of gates along the entrance drives in order to limit the hours of operation. Gates could also be used to control traffic

and limit the number of visitors should overcrowded conditions become a problem. This is an administrative decision.

In addition, there may be the opportunity to use a part of the vacant property parallel to the westerly edge of the Park and having frontage to Bensalem Boulevard for overflow parking. This area has been identified on the plan. The Parks and Recreation Board should initiate negotiations with the present owner in order to negotiate permission to use a part of the property - one half acre should be sufficient - for additional parking should this become necessary during crowded times in the summer. This need would likely occur only in the case of MP-2 or MP-3 where more facilities are contemplated. It is important to note that the overflow parking may be required only during special events and not on a regular basis. A summer weekend could be considered a special event in the context of this discussion.

D. Township Recreation Programs

In addition to facilities that could be used for unstructured play and recreation, there is the opportunity to institute various recreation programs to enhance the physical, social and intellectual well being of Bensalem Township residents.

During the summer, organized activities could include a Township sponsored 5 day/week day camp program for children be-

tween the ages of 6 - 13. These camps normally run between 7 - 10 weeks.

This day camp could include a minimal fee with a program of activities to include: arts and crafts, archery, field sports (limited), and nature study. A support staff would be required. This program is appropriate only in Master Plan 3 since this stage provides for toilets and drinking water.

During the winter, once the ice skating pond is established, an ice hockey club and/or skating club could be organized by the Township, the operation costs of which could be self supported.

Figure C indicates seasonal local Township programs which could be implemented as part of the Township Parks and Recreation Program for the James Armstrong Memorial Park. The number and extent of such programs is dependent upon the actual facilities constructed. Figure C: Typical Township Recreation Programs is intended to serve as a guide for Township program development once adequate facilities and staff are realized.

E. Development Priorities

The unique characteristics of the subject park, including extensive creek frontage in a natural setting along with good vehicular access, indicate a special opportunity to mix scenic and shore line activities with other facilities normally associated with a neighborhood park.

TYPICAL TOWNSHIP RECREATION PROGRAMS
PROPOSED FOR
JAMES ARMSTRONG MEMORIAL PARK

| <u>PROGRAM</u> | <u>SEASON</u> ¹ | <u>MP1</u> | <u>MP2</u> | <u>MP3</u> |
|--------------------------------|----------------------------|------------|------------|------------|
| Active/Physical | | | | |
| Basketball | Sp, Su, F | X | X | X |
| Bicycle Marathon | Sp, Su, F | | | X |
| Run-A-Thon | Sp, Su, F | | | X |
| Jogging | All | | X | X |
| Exercise/Calisthenics | Sp, Su, F | | X | X |
| Canoeing | Su | | | X |
| Skating | W | | | X |
| Cookouts | Su | X | X | X |
| Parties | Su, F | X | X | X |
| Passive/Intellectual | | | | |
| Picnicking | Su | X | X | X |
| Fly Tying/Fishing | Su | X | X | X |
| Wildflower Walks | Sp | X | X | X |
| Nature Walks | All | X | X | X |
| Arts & Crafts | Su | X | X | X |
| Contests/Exhibits ² | Su | X | X | X |

- Notes: 1. Sp = Spring, Su= Summer, F = Fall, W = Winter, All = All Seasons
2. Including photography, art, coins, ceramics, other hobbies.

Acquisition of unowned properties within the 20 acre envelope previously described is a first priority.

After initial park development is undertaken, then the Township should consider acquisition of additional lands - as their sale or acquisition funds become available - along the westerly and northerly perimeter.

Ideally, ownership of all or most of the land situated between the Neshaminy Creek and Bensalem Boulevard north to Bridge Road would be an excellent goal. This is justified by the unique opportunity to create public access to the water's edge along with the need to ensure long range insulation/buffer from the nearby urban environment.

A second major priority must be to enhance the potential use and enjoyment of the Park by undertaking the development of James Armstrong Memorial Park to a level no less than that illustrated on Master Plan MP-2.

It should be noted that MP-1, Limited Development, is presented as the least amount of improvement necessary to accomplish a first phase of park development.

Furthermore, MP-3, Full Development, is intended to accomplish the wide variety of facilities providing the greatest service in terms of programs and activities (active and passive) to a growing population.

In Master Plan MP-3 these facilities serve more ages through more seasons in greater comfort and provide opportunity for structured programs to more people than any other alternative. Therefore, MP-3, Full Development, is preferred and highly recommended as being in the best interests of Bensalem Township.

It should be recognized that the Master Plan is conceived to preserve as much of the natural quality of the park as possible while creating the opportunity for user enjoyment in the areas of both active and passive recreation.

III. COST ESTIMATES

A. Development Cost

Estimated cost for 1982 construction have been used and are tabulated below for each Master Plan alternative.

James Armstrong Memorial Park Estimated Cost (1982 Construction)

| | MP-1 | MP-2 | MP-3 |
|-------------------------------------------------------------------------|--------------|-------------|--------------|
| New Paving for Access | 10,000.00 | ----- | ----- |
| New Buff or Landscaping | 6,000.00 | ----- | ----- |
| Parking for 50 cars | 10,000.00 | ----- | ----- |
| 65 cars | ----- | 3,000.00 | ----- |
| *Picnic Tables & fire-places | 6,000.00 | 6,000.00 | ----- |
| General Clean-up | 3,000.00 | ----- | ----- |
| Clear & Thin Under Story | 7,000.00 | ----- | ----- |
| Rehab. Existing Fishing Fier | 1,500.00 | ----- | ----- |
| Clear & Seed Free Play Area | 15,000.00 | ----- | ----- |
| Construct 2 New Fishing Piers | ----- | 7,000.00 | ----- |
| Tot Lot | ----- | 25,000.00 | ----- |
| Horseshoe Pits (2) | ----- | 1,000.00 | ----- |
| Exercise Trail, (3000LF) | | | |
| (gravel) | ----- | 32,000.00 | ----- |
| (paving) | ----- | ----- | 13,000.00 |
| **Canoe Stand & Launch | ----- | ----- | 2,000.00 |
| ***Ice Skating Pond | ----- | ----- | 35,000.00 |
| Warming Shelter | ----- | ----- | 8,000.00 |
| Rest Rooms | ----- | ----- | 20,000.00 |
| Public Water Fountain | ----- | ----- | 3,000.00 |
| Resurface Basketball Court | ----- | ----- | 4,000.00 |
| Miscellaneous Site Improvements (Signs, Ballards, Fencing, Gates, etc.) | 10,000.00 | 10,000.00 | 15,000.00 |
| Totals | \$ 68,500.00 | \$84,000.00 | \$100,000.00 |

* 12 picnic tables and 3 fireplaces per phase

** Assumes canoe stand is provided by concessionaire

*** Includes clearing of trees and natural base pond only

B. Cost Summary

MP-1 - \$ 68,500.00

MP-2 - 84,000.00

MP-3 - 100,000.00

\$252,500.00

Engineering
(15%)

37,875.00

\$290,375.00

It should be noted that some of the items above are based on contracting prices. Saving in some areas may be found if township forces perform the work.

